

Atty. Dkt. No. 10015967-1**CLAIM AMENDMENTS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

- 1 1. (Original) A method for adaptation of a computer system, network or
2 subsystem comprising developing a design for the system and performing an
3 automated loop comprising implementing the design; analyzing operation of
4 the design after said implementing; and modifying the design based on results
5 of said analyzing.
- 1 2. (Original) The method according to claim 1, further comprising forming
2 models of components of the system and applying results of said analyzing to
3 the models.
- 1 3. (Original) The method according to claim 2, wherein said applying results
2 of said analyzing to the models indicates utilization of a component of the
3 system.
- 1 4. (Original) The method according to claim 3, wherein said modifying the
2 design is performed in response to the utilization.
- 1 5. (Original) The method according to claim 4, wherein said modifying is
2 also performed in response to a desired headroom level.
- 1 6. (Original) The method according to claim 5, wherein said desired
2 headroom level provides that components of the system operate at less than
3 100% utilization.
- 1 7. (Currently Amended) The method according to claim [[7]]5, wherein said
2 desired headroom level provides that components of the system operate at
3 more than 100% utilization.
- 1 8. (Original) The method according to claim 1, wherein said implementing
2 the design comprises forming a plan and then implementing the plan.

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- 1 9. (Original) The method according to claim 1, wherein said system
2 comprises a CPU farm.
- 1 10. (Original) The method according to claim 1, wherein said system
2 comprises a data caching system.
- 1 11. (Original) The method according to claim 1, wherein said system
2 comprises a database system.
- 1 12. (Original) The method according to claim 11, wherein said modifying
2 comprises modifying indices of the database system.
- 1 13. (Original) A method for adaptation of a data storage system, comprising
2 developing a design for the data storage system and performing an automated
3 loop comprising implementing the design; analyzing operation of the design
4 after said implementing; and modifying the design based on results of said
5 analyzing.
- 1 14. (Original) The method according to claim 13, further comprising forming
2 models of components of the data storage system and applying results of said
3 analyzing to the models.
- 1 15. (Original) The method according to claim 14, wherein said applying
2 results of said analyzing to the models indicates utilization of a component of
3 the data storage system.
- 1 16. (Original) The method according to claim 15, wherein said modifying the
2 design is performed in response to the utilization.
- 1 17. (Original) The method according to claim 16, wherein said modifying is
2 also performed in response to a desired headroom level.

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- 1 18. (Original) The method according to claim 17, wherein said desired
2 headroom level provides that components of the data storage system operate at
3 less than 100% utilization.
- 1 19. (Original) The method according to claim 17, wherein said desired
2 headroom level provides that components of the data storage system operate at
3 more than 100% utilization.
- 1 20. (Original) The method according to claim 13, wherein said implementing
2 the design comprises forming a plan for migrating data and then implementing
3 the plan.
- 1 21. (Original) The method according to claim 20, wherein said forming a
2 plan comprises forming a directed multigraph and computing a maximum
3 general matching.
- 1 22. (Original) The method according to claim 13, wherein said analyzing
2 comprises forming a trace of storage system events and forming a workload
3 characterization based on the trace.
- 1 23. (Original) The method according to claim 22, wherein said workload
2 characterization comprises a number of parameter values that summarize the
3 trace.
- 1 24. (Original) The method according to claim 23, further comprising forming
2 models of components of the data storage system and applying said workload
3 characterization to the models.
- 1 25. (Original) A method for adaptation of a data storage system, comprising:
2 developing a design for the data storage system;
3 implementing the design;
4 forming a trace of storage system events;
5 forming workload characterization from the trace;

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6 applying the workload characterization to models of components of the
7 data storage system, wherein said applying indicates utilization of a
8 component of the data storage system; and
9 modifying the design in response to the utilization indicated by said
10 analyzing.

1 26. (Original) The method according to claim 25, wherein said modifying
2 results in a modified design and further comprising implementing the modified
3 design.

1 27. (Original) The method according to claim 26, wherein said modifying
2 comprises forming a device tree data structure that is representative of the
3 storage system.

1 28. (Original) The method according to claim 27, wherein said modifying
2 comprises reassigning data stores to components of the data storage system.

1 29. (Original) The method according to claim 28, wherein said implementing
2 the modified design comprises forming a plan for migrating data and then
3 implementing the plan.

1 30. (Original) The method according to claim 29, wherein said forming a
2 plan comprises forming a directed multigraph and computing a maximum
3 general matching.

1 31. (Original) The method according to claim 25, wherein said modifying is
2 also performed in response to a desired headroom level.

1 32. (Original) The method according to claim 31, wherein said desired
2 headroom level provides that components of the data storage system operate at
3 less than 100% utilization.

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33. (Original) The method according to claim 31, wherein said desired headroom level provides that components of the data storage system operate at more than 100% utilization.